

Factsheet: General Rules for Construction Electrical Safety

Major Protective Methods from Electrical Hazards

Protection from electrical hazards generally includes the following methods:

1. **Distance:** Commonly used with regard to power lines.
2. **Isolation and guarding:** Restricting access, commonly used with high voltage power distribution equipment.
3. **Enclosure of electrical parts:** A major concept of electrical wiring in general, e.g., all connections are made in a box.
4. **Grounding:** Required for all non-current carrying exposed metal parts, unless isolated or guarded as above. (*However, corded tools may be either grounded or be double-insulated.*)
5. **Insulation:** Intact insulation allows safe handling of everyday electrical equipment, including corded tools. This category also includes insulated mats and sleeves.
6. **De-energizing and grounding:** Protective method used by electrical utilities and also in conjunction with electrical lockout/tagout.
7. **Personal Protective Equipment (PPE):** Using insulated gloves and other apparel to work on energized equipment, limited to qualified and trained personnel working under very limited circumstances.

General Rules for Electrical Work

- **Non-conductive PPE is essential for electricians. NO METAL PPE!**
Class B hard hats provide the highest level of protection against electrical hazards, with high-voltage shock and burn protection (up to 20,000 volts).
Electrical hazard, safety-toe shoes are nonconductive and will prevent the wearers' feet from completing an electrical circuit to the ground.
- **Be alert to electrical hazards**, especially when working with *ladders, scaffolds and other platforms*.
- **Never bypass electrical protective** systems or devices.
- **Disconnect cord tools** when not in use and when changing blades, bits or other accessories.
- **Inspect all tools** before use.
- **Use only grounded extension cords.**
- **Remove damaged** tools and damaged extension cords from use.
- **Keep working spaces and walkways clear** of electrical cords.

Rules for Temporary Wiring and Lighting

- **Use Ground Fault Circuit Interrupters (GFCIs)** on all 15-Amp and 20-Amp temporary wiring circuits.
- **Protect temporary lights** from contact and damage.
- **Don't suspend temporary lights by cords**, unless the temporary light is so designed.